

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) An apparatus for the measurement of a spectrum ~~said~~ apparatus, comprising;

a CCD array including a plurality of individual detectors, each of said plurality of ~~detector~~ detectors producing a signal dependent ~~in part~~ on the amount of light measured by said ~~detector~~ detectors;

a database ~~[[of]]~~ including a dark signal measured by each of said ~~detector~~ plurality of said detectors when no light has fallen on said ~~detector~~ detectors;

a temperature-measuring device adapted to measure the temperature of said array, said database including ~~[[the]]~~ said dark signal for each of ~~detector~~ said plurality of detectors measured at several different temperatures;

a time calculating device adapted to measure exposure time, said database including ~~[[the]]~~ said dark signal for each of ~~detector~~ said plurality of detectors measured at several different exposure times; and

a signal correction device that reduces the signal measured by each of said ~~detector~~ plurality of detectors by the dark signal to produce a corrected signal for ~~[[each]]~~ said ~~detector~~ detectors;

Claim 2. (Currently amended) A method of correcting the signal of each detector in a CCD array measuring a light distribution across the array, said method comprising the steps of:

measuring a dark signal of each detector when no light is falling onto said detector and storing said dark signal in a database;

measuring a light signal of each detector with light falling onto said array; and
removing ~~[[the]]~~ said dark signal for each detector from the measured light signal
to provide a corrected spectrum.

Claim 3. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each
detector in a CCD array ~~measuring a light distribution across the array~~ as in claim 2, wherein
said method further ~~comprising~~ includes the steps of:

- (a) measuring ~~[[the]]~~ said dark signal of each detector at a first temperature;
- (b) storing ~~[[the]]~~ said dark signal for each detector for said first temperature in a
database;
- (c) varying the temperature of said array to a second temperature; and
- (d) repeating steps (a) to (c) for a ~~number~~ plurality of different temperatures.

Claim 4. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each
detector in a CCD array ~~measuring a light distribution across the array~~ as in claim 3, wherein
said method ~~comprising~~ further includes the steps of;

- measuring ~~[[the]]~~ said temperature of the array when measuring a light distribution;
- recalling ~~[[the]]~~ said dark signal for each detector stored in said database representative
of said measured temperature; and
- subtracting ~~[[the]]~~ said recalled dark signal from ~~[[the]]~~ said database for each detector
from ~~[[the]]~~ said measured signal of each detector.

Claim 5. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each
detector in a CCD array ~~measuring a light distribution across the array~~ as in claim 2, wherein
said method further ~~comprises~~ include the ~~[[steps]]~~ step of taking ~~[[the]]~~ said dark signal
measurement over a pre-determined period of time.

Claim 6. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each detector in a CCD array ~~measuring a light distribution across the array~~ as in claim 3, wherein said database is provided in a memory means located on said CCD array.

Claim 7. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each detector in a CCD array as in claim 3, wherein said dark signal stored in said database is an average of a plurality of dark signals measured over said time and temperature.

Claim 8. (Currently amended) ~~[[A]]~~ The method of correcting the signal of each detector in a CCD array as in claim 3, wherein said database is provided on a CD ~~or other storage media~~.

Claim 9. Canceled